CORPORATE PROFILE

ITT GROUP

63 Years
1954 - 2017
“Profound process know-how, over 63 years of engineering and execution excellence as well as proximity to our clients’ operation are our most valuable assets. They assure our customers that ITT team understands their challenges and is committed and capable to find the most optimal solution, not only to meet but also to exceed customers’ expectations.
For all the determined men and women working at ITT group, customers satisfaction and longstanding trustful cooperation are the utmost priorities.

That is how we go beyond performance... We offer our customers a True Partnership and a Life-Time Commitment.”

Arturo Piccioni
Chief Executive Officer
The objectives of ITT Group are to engage responsibly, efficiently and profitably in the hydrocarbon engineering sector and other selected business areas that ITT Group is focused on. 

Our core values of honesty, integrity, fairness and respect for people are at the heart of everything we do. They apply to all our business affairs from the headquarter offices all the way to the most remote execution sites around the globe. These core values are the foundation of our business principles that are applicable to all business interactions and drive every employee’s behavior in conducting business at any time.

Our long-standing reputation and the customers’ invaluable trust have been achieved based on our business principle, which are:

- Quality, Health, Safety and Environment (QHSE)
- Economic and competitive products, solutions and services
- Deliver value to our customers
- Transact with Business integrity
- Deliver on our commitments
- Open communication and engagement
- Care about local communities

The Governance at ITT Group is to ensure we abide, in addition to the regulatory frameworks, by the high standards and business principles we set as a Group. We have implemented a clear and effective structure, along with performance standards and controls, which are to guide the decisions we make and the actions we take as we conduct business or operate, at every level of our company. Our governance procedures are applied to all areas of decision-making across the group.
The health & safety of our personnel, our clients and partners as well as the communities, in which we operate is our highest priority at ITT. We are committed to design, fabricate, erect and construct our products, solutions and services with the highest quality and in a safe and environmentally responsible manner. We chose “Zero” as a challenging goal for our safety performance. We strive for no harm to people and planet and this is an integral foundation of our value system at ITT.

ITT is operating with an integrated and comprehensive Quality Management System, certified by TÜV as per ISO 9001:2015. Best-in-class design, engineering and project management are integral parts of our offering to the clients, whether the job is to provide a feasibility study or to deliver a complex reformer to a refinery or petrochemical asset. At every step, we use well-proven and tested processes and procedures, profound process know-how accumulated over more than half a century, clear lines of responsibility and robust internal controls to meet the most demanding standards and customer requirements.

We build on our experience with every project. This ever-expanding know-how base combined with flow of feedback from customers and operators at various sites help us continually improve our products, processes and performance. This company-wide culture, commitment and accountability is aimed to ensure one thing and that is the satisfaction of our customers. And this is the true meaning of commitment to quality for us at ITT.
OUR HISTORY

- The company roots back to mid 50s
- ITT spun off as a leading independent international hydrocarbon engineering company
- ITT to supply steam reformer licensed by HTAS
- ITT to supply steam reformer by Technip
- ITT started new Headquarters in Milan
- ITT to supply steam reformer with KBR license
- ITT to supply steam reformer with Lurgi license
- ITT to supply fully modularized steam reformer with DAVY license
- Single largest contract to supply 4 reformers to KNPC (Kuwait)

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GROUP STRUCTURE

ITT HOLDING S.P.A.

- ITT CH SA
  - Lugano
- ITT S.P.A
  - Milan
- ITT REAL ESTATE
- ITT ENERGY S.r.l.

ITT ROME

ITT CHINA  
- Shanghai

ITT KOREA
- Seoul

ITT BRAZIL
- Sao Paolo

ITT INDIA
- New Delhi

1) PROJECT MANAGEMENT OFFICE (PMO)
With astounding knowhow since 1954, International Thermal Technology (ITT) S.p.A is a leading international hydrocarbon engineering group, specialized in design and turn-key supply of Reformers, Fired Heaters and Heat Transfer solutions to the Oil & Gas, Refineries and Petrochemical industries.

With its profound process knowledge, thermal and mechanical design capabilities enhanced with in-house developed proprietary soft-wares and over half a century of successful experience in delivering equipment and turn-key solutions to the hydrocarbon industry, ITT has, for decades, been a trusted and reliable partner of choice and an "Approved Vendor" to most recognized EPC contractors and end users such as Saudi Aramco, the world's largest oil company.

ITT has been also recognized and qualified as a “Reformers Designer” by Petrobras. ITT has proudly supplied more than 60 reformers and over 1000 heaters to the customers around the globe. (Pls see Reference List)

In addition to its own design for the process solutions, ITT is an “Approved Constructor” of Reformers and Heaters designed by 3rd part licensors such as Haldor-Topsæe, Davy Process Technology, KBR, Technip, Uhde, Lurgi, Casale; and has been carrying out detailed engineering, procurement, fabrication, erection installation and start-up of these process solutions for a wide range of applications in the Oil, Gas and Petrochemical Industries.

ITT Group develops and conducts its business globally through an extensive and integrated network of subsidiaries, branches and business partners. That is how we have, over decades, ensured serving our customers locally.

ITT has also made significant efforts to address the local and in-country-value-add initiatives launched by several governments and national clients around the globe. We at ITT take great pride in having delivered global solutions by using local talents and resources and engaging with the local communities wherever we operate.

ITT has been recognized by its clients and partners for its unparalleled commitment to safety, quality and performance not only at the execution phase of the projects but also thru their life cycle.

ITT Services team has been working relentlessly over the past many years to deliver reliability and availability to the clients by ensuring best-in-class technicians and smart digital solutions are just a click away from our customers.
OUR GLOBAL PRESENCE

HQ
Subsidiary
Local Entity / Branch
Local Representatives
OUR MANAGEMENT TEAM

Alessandra Gualandris
Giorgio Piccioni
Gulia Piccioni

Board of Directors

Alessandra Gualandris
CFO

Gianluca Tiballi
Projects & Procurement Director

Claudio Bonventre
Process Director

Valerio Villante
R&D and 3D modeling

Massimo Cassinari
Engineering Director

Antonio Li Zunni
Sales Director

Vincenzo Granato
QHSE Director

Charles Dadvisard
Business Development Director

Arturo Piccioni
CEO & MD
OUR STRATEGIC FOCUS, OUR COMMITMENT

- Design & Engineering Excellence
- Advanced 3D Modeling
- Modularization

Shorter Time from design to performance

- Life Cycle Data management
- Advanced Controls

Enhanced Operational Flexibility

- Best-in-class human capital
- Continuous learning programs

World-class products & Top quality Services

- Strong global presence
- Close local engagement with customers
- In-country Value-Add

Close to Customers
<table>
<thead>
<tr>
<th><strong>545 MMBtu</strong></th>
<th><strong>1,705 MMBtu</strong></th>
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</thead>
<tbody>
<tr>
<td>Largest single train Heater</td>
<td>Largest single train Reformer</td>
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</table>

<table>
<thead>
<tr>
<th><strong>60</strong></th>
<th><strong>56</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Steam Reformers delivered</td>
<td>No. of Countries supplied to</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>1,000</strong></th>
<th><strong>1,400 ton</strong></th>
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<tbody>
<tr>
<td>Fired Heaters delivered</td>
<td>Heaviest single module shipped</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>100</strong></th>
<th><strong>more than 17,000</strong></th>
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</thead>
<tbody>
<tr>
<td>No. of Skilled Engineer</td>
<td>Centricast Tubes</td>
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</table>
OUR PORTFOLIO

Engineering Services:
- PDP packages and Basic Engineering (ITT design)
- Energy Conservation & Efficiency Enhancement Feasibility studies
- Revamps and retrofit consulting services
- Detailed Engineering of 3rd Party Licensors’ Basic Design

Reformers:
- Engineering, Procurement, Fabrication & Erection of Reformer packages for Hydrogen, Methanol, Ammonia & SynGas processes (either grass-root customized or based on 3rd party Licensors’ basic design (e.g. Haldor-Topsøe, Davy, KBR, Technip, Uhde, Lurgi, Casale)
- Revamps. Retrofit and modification of brown field reformers

Heaters:
- Basic/Detailed Engineering, Procurement, Fabrication & Erection of various Heaters in refining and petrochemical plants such as:
  - Crude Oil / Vacuum / Hydrocracker / Hydrotreater / Start up / Hot oil /Platforming / Visbreaking / Coker / Propane Dehydration / Steam Super heater / Reboilers / Regeneration Furnaces & Ethylene Cracking Heaters...

Waste Heat Mgmt. Solutions:
- Waste Heat Recovery Section (WHRS)
- Waste Heat Boilers (WHB)
- Air Pre-Heating Systems
- Heat Recovery Steam Generation System (HRSG)

Modularized & Packaged Solutions
- Design & Engineering
- Planning & Coordination
- Fabrication & Logistics

Life Cycle & Operation Services:
- De-bottlenecking & Capacity enhancement
- Maintenance & Spare parts (from reactive to predictive)
- Energy Saving, Efficiency & fuel consumption optimization
- Life time extension
- Emission reduction / Environmental compliance
Engineering Services include:

- POP packages and Basic Engineering for reformers and fired heaters (ITT design)
- Energy Conservation & Efficiency Enhancement Feasibility studies
- Revamps and retrofit consulting services
- Detailed Engineering of 3rd Party Licensors’ Basic Design
- 3D Modeling and virtual reality design (watch our 3D design process)

Delivering our sophisticated solutions and services successfully means they must be on time and on budget! To achieve this and to do so consistently over more than half of century the design and engineering needs to be conducted with such accuracy and integrity that no reworks is required. We at ITT have been investing significant financial and human capital in developing state of the art and proprietary software, implementing integrated design processes and procedures while grooming and retaining experts and skilled engineers, who have been mastering the art of design and engineering for decades. There is a systematic effort at ITT to ensure our designs are:

- Economic and cost efficient
- Robust and reliable
- Compact and logistic-friendly
- Energy efficient & Environmentally sound

Our team has been working with almost all the major companies around the globe and thus are well acquainted with their codes, standards and specifications. Furthermore, being a “Qualified Constructor” for all major licensors means ITT team has had the exposure to variety of technologies and is well positioned to ensure best-in-class design and engineering based on this invaluable experience of more than 60 years.
STEAM REFORMERS

- An extensive global reference list of over 60 Steam Reformers
- Designed, built and commissioned in various refining and petrochemical applications based on license from:
  - Haldor Topsoe
  - Technip
  - Lurgi
  - KBR
  - Davy
  - Uhde
  - Casale
  - Energiron
- Design flexibility and adoptability based on customer needs across various parameters such as firing, pigtails, headers, transfer lines, tubes, etc.

See catalogue & reference list
## Steam Reformers

**Licenser**: HTAS  
**Service**: Hydrogen  
**Capacity**: 206,900 Nm³/hr

![Steam Reformers Image]
# Reformers

<table>
<thead>
<tr>
<th>Unit</th>
<th>Licensor</th>
<th>Client</th>
<th>Service</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reformer</td>
<td>HTPS</td>
<td>Air Liquide</td>
<td>H2</td>
<td>100,000 Nm³/h</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Unit</th>
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<th>Client</th>
<th>Service</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reformer</td>
<td>Technip</td>
<td>NIOC</td>
<td>H2</td>
<td>47,000 Nm³/h</td>
</tr>
</tbody>
</table>

Licensee: KBR
Service: Ammonia
Capacity: 900 tpd
- An extensive global reference list of over 1000 Fired Heaters
- Design, basic and detailed engineering, fabrication and erection of heaters for variety of applications such as:
  - Crude Oil | Vacuum
  - Hydrocracker | Hydrotreater
  - Start up / Hot oil | Platforming
  - Visbreaking | Cocker
  - Propane Dehydration |
  - Steam Super heater | Reboilers
  - Regeneration Furnaces & Ethylene Cracking Heaters...
- Design flexibility and adoptability based on customer needs across various parameters such as firing, pigtails, headers, transfer lines, tubes, etc.

See catalogue & reference list
WASTE HEAT MANAGEMENT SOLUTIONS

- Waste Heat Boilers (WHB)
  - ITT’s Design, basic and detailed engineering, fabrication and erection of WHB for variety of applications

- Waste Heat Recovery Section (WHS)
  - ITT’s Design, basic and detailed engineering, fabrication and erection of WHB for variety of applications

- Heat Recovery Steam Generation System (HRSG)
  - ITT’s Design, basic and detailed engineering, fabrication and erection of WHB for variety of applications

See catalogue & reference list
ENGINEERING & EXECUTION EXCELLENCE:

The project success hinges, amongst other things, on two main factors:

- Best-in-class designs on the one hand and
- Efficient execution (fabrication & erection) on the other hand.

We at ITT have developed and deployed an unparalleled combination of human and digital capabilities, which allow us not only to meet but also strive to exceed our client’s expectations.

To do so, we put a great deal of attention and effort in ensuring:

A) **Most Optimal Degree of Modularization**

&

B) **Virtual 3D review of all designs prior to fabrication**
THE ART OF DESIGN

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Building upon decades of design and execution excellence, ITT S.P.A has successfully performed more than 60 modularized units, ranging from world-scale reformers to vertical, cylindrical and or box heaters and recovery systems.

The following aspects are mission critical:

- Smart design and engineering
- Seamless planning and coordination
- Smooth fabrication and logistics
- Handling Solution: Ro-Ro with SPMT and/or Heavy Lifting
- Skilled man-power (erector, welder, fitter...)

60 Modularized units executed till 2016

1,400 ton Heaviest single module shipped

16,000 ton Weight of modules delivered till 2016

See reference list
• **Client:** Mitsubishi Heavy Industries (MHI)

• **Licensor:** JM DAVY

• **Ro-Ro modules weight:** 2800 ton!

• **24 Modules:**
  - 2 Radiant and 2 Penthouse Modules for Roll-on & Roll-off (Ro-Ro) loading
  - 20 modules / assemblies for heavy lifting
  - All modules prefabricated at the workshop and completed at the port yard
  - **580** off catalyst tubes and **220** off burners modularized together with refractory, ducts, steelworks, piping ...
  - 2 Radiant sections split into Ro-Ro modules and loading operation conducted using SPMT.
At ITT our commitment to customers go far beyond the design and delivery.

We continue to support our clients throughout the plant’s life cycle with an extensive range of services and supports ranging from spare parts management all the way to rehabilitation, renovation and expansions.

In addition, ITT would support the clients with project financing for specific projects.
OUR REFERENCES

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1998 - 2017